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EXAMINER	
STANLEY, MARK P	
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2427	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/798,620	LANE, RICHARD DOIL	
	Examiner	Art Unit	
	MARK P. STANLEY	2427	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 December 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30,32-54,56-81,84-94,96-102,105-112 and 115-123* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30,32-54,56-81,84-94,96-102,105-112 and 115-123* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claim 1-2, 5, 7-12, 14, 18, 20-23, 25-26, 29, 32-36, 38, 42, 44-47, 49-50, 53, 56-60, 62, 66, 68-71, 73-74, 76-77, 79-81, 84-87, 91, 93-94, 96-97, 101-102, 105-107, 111-112, 115-118, and 122 rejected under 35 U.S.C. 103(a) as being unpatentable over Christopoulos et al. (US 2001/0047517 hereinafter Christopoulos) in view of Anantharamu et al. (US 2002/0136298 hereinafter Anantharamu).

Regarding claim 1, Christopoulos discloses "an apparatus, operable in a wireless communication system, comprising:

an encode manager included within wireless service provider equipment of the wireless communication system for receiving a multimedia stream; and" ([0033], [0035]-[0036], Fig. 1 item 120 gateway with item 125 transcoder receives a multimedia stream from item 113 multimedia storage)

"an encoder system included within the wireless service provider equipment for re-encoding the received stream using a encoding parameter set to output an encoded stream with principles set forth by the encoding parameter set, wherein the encoding parameter set is determined according to an encoding scheme based on available bandwidth within the wireless communication system" ([0007], [0037]-[0038], [0046], Fig. 1, Fig. 3 items 350 and 360, item 125 the transcoder selects a scheme to re-encode multimedia stream based upon various factors including available bandwidth).

But, Christopoulos does not explicitly state dynamically determining a current bandwidth available for the multimedia stream based on a current number and types of users. However, Anantharamu teaches dynamically estimating the available bandwidth available and transcodes the stream based on a current number and types of users ([0020], [0035], Figs. 2-3)

Therefore it would have been obvious at the time of the invention to combine the teachings of Christopoulos for adaptive encoding in a wireless communication system with the teachings of Anantharamu for adaptive encoding in a wireless communication system based on dynamically estimating the available bandwidth according to the current number and types of users. One would have been motivated to do so to provide a more efficient manner of streaming video in dynamic bandwidth networks (see Anantharamu [0005).

Regarding claim 2, Christopoulos and Anantharamu disclose "the apparatus of claim 1, wherein the encoding scheme is selected from a group consisting of a scheme based on a system bandwidth, a scheme based on a wireless receiver capability, a scheme based on a number of users requesting a specific multimedia stream at a designated QoS, a scheme based on a multimedia data type, a scheme based on a user preference and a scheme based on characteristics of a mobile station" ([0036-[0038], [0046]-[0047], Fig. 3).

Regarding claim 5, Christopoulos and Anantharamu disclose "the apparatus of claim 2, further comprising an encoder for executing the encoder parameter set based on the encoding scheme" ([0014], Fig. 1 item 125).

Regarding claim 7, Christopoulos and Anantharamu disclose "the apparatus of claim 1 further comprising a bandwidth manager for determining the available bandwidth for a requested multimedia stream" ([0007], [0036], [0046]).

Regarding claim 8, Christopoulos and Anantharamu disclose "the apparatus of claim 1, further comprising a decoder for receiving the multimedia stream and decoding the received stream to output a decoded stream, wherein the encoder system re-encodes the received stream by re-encoding the decoded stream using the encoding

parameter set to output the encoded stream with principles set forth by the encoding parameter set" ([0036]-[0038], [0046], Figs. 3 and 5).

Regarding claim 9, Christopoulos and Anantharamu disclose "the apparatus of claim 1, wherein the encoder manager comprises a bandwidth manager for determining the encoding parameter set based on the encoding scheme" ([0007], [0036], [0046]).

Regarding claim 10, Christopoulos and Anantharamu disclose "the apparatus of claim 1, wherein the encoder system comprises an encoder for executing the encoder parameter set" ([0014], Fig. 1 item 125).

Regarding claim 11, Christopoulos and Anantharamu disclose "the apparatus of claim 1, further comprising a transceiver for wirelessly transmitting the re-encoded stream to a mobile station" ([0003], [0007], [0035], Fig. 1 item 130, a transmitter and receiver at both ends for bi-directional wireless communications would be necessary).

Regarding claim 12, Christopoulos and Anantharamu disclose "the apparatus of claim 1, wherein the encoding system providing an output configurable for handheld devices that require a first frame rate and a first bandwidth" ([0002], [0036]-[0038], [0046]-[0047]).

Regarding claim 14, Christopoulos and Anantharamu disclose "the apparatus of claim 1,

wherein the received stream comprises a stream of a first resolution, and

wherein the encoding system re-encodes the received stream by re-encoding the stream of a first resolution to a stream of a second resolution, a first frame rate and a first bandwidth" ([0002], [0036]-[0038], [0046]-[0047], [0056], Fig. 3).

Regarding claim 18, Christopoulos and Anantharamu disclose "the apparatus of claim 14, wherein the second resolution is a resolution of a quarter common intermediate format (QCIF) or smaller" ([0047]).

Regarding claim 20, Christopoulos and Anantharamu disclose "the apparatus of claim 1, further comprising a computer configured to receive the multimedia stream from a mobile station" ([0003], [0035]).

Regarding claim 21, Christopoulos and Anantharamu disclose "the apparatus of claim 20, wherein the mobile station is operable in the wireless communication system" ([0003], [0035]).

Regarding claim 22, Christopoulos and Anantharamu disclose "The apparatus of claim 1, wherein the multimedia stream is received using an over the air communication air interface" ([0007], [0035]).

Regarding claim 23, Christopoulos and Anantharamu disclose "the apparatus of claim 1, wherein the multimedia stream is received using an internet connection" ([0003], [0035]).

Regarding claim 25, Christopoulos discloses "a method for providing digital multimedia in a wireless communication system, comprising:

receiving a multimedia stream at an encode manager of the wireless communication system; and" ([0033], [0035]-[0036], Fig. 1 item 120 gateway with item 125 transcoder receives a multimedia stream from item 113 multimedia storage)

"re-encoding the received stream using an encoding parameter set to output an encoded stream with principles set forth by the encoding parameter set, wherein the encoding parameter set is determined according to a first encoding scheme based on available bandwidth within the wireless communication system" ([0007], [0037]-[0038], [0046], Fig. 1, Fig. 3 items 350 and 360, item 125 the transcoder selects a scheme to re-encode multimedia stream based upon various factors including available bandwidth).

But, Christopoulos does not explicitly state dynamically determining a current bandwidth available for the multimedia stream based on a current number and types of users. However, Anantharamu teaches dynamically estimating the available bandwidth available and transcodes the stream based on a current number and types of users ([0020], [0035], Figs. 2-3)

Therefore it would have been obvious at the time of the invention to combine the teachings of Christopoulos for adaptive encoding in a wireless communication system with the teachings of Anantharamu for adaptive encoding in a wireless communication system based on dynamically estimating the available bandwidth according to the current number and types of users. One would have been motivated to do so to provide a more efficient manner of streaming video in dynamic bandwidth networks (see Anantharamu [0005).

Regarding claim 26, Christopoulos and Anantharamu disclose "the method of claim 25, further comprising selecting the first encoding scheme from a group consisting of a scheme based on a system bandwidth, a scheme based on a wireless receiver capability, a scheme based on a number of users requesting a specific multimedia stream at a designated QoS, a scheme based on a multimedia data type, a scheme based on a user preference and a scheme based on characteristics of a mobile station" ([0036-[0038], [0046]-[0047], Fig. 3).

Regarding claim 29, Christopoulos and Anantharamu disclose "the method of claim 26, further comprising an encoder for executing the encoder parameter set based on the encoding scheme" ([0014], Fig. 1 item 125).

Regarding claim 32, Christopoulos and Anantharamu disclose "the method of claim 25, further comprising receiving the multimedia stream at a decoder and decoding the received stream to render output a decoded stream" ([0036]-[0038], [0046]-[0047], Figs. 3 and 5).

Regarding claim 33, Christopoulos and Anantharamu disclose "The method of claim 25, further comprising determining the encoding parameter set to use for re-[[ ]]encoding based on the encoding scheme" ([0007], [0036], [0046]).

Regarding claim 34, Christopoulos and Anantharamu disclose "the method of claim 25, further comprising executing the encoder parameter set using an encoder" ([0014], Fig. 1 item 125).

Regarding claim 35, Christopoulos and Anantharamu disclose "the method of claim 25, further comprising wirelessly transmitting the re-encoded stream" ([0003], [0007], [0035], Fig. 1 item 130, a transmitter and receiver at both ends for bi-directional wireless communications would be necessary).

Regarding claim 36, Christopoulos and Anantharamu disclose "the method of claim 25, further comprising generating an output, configurable for handheld devices that require a first frame rate and a first bandwidth" ([0002], [0036]-[0038], [0046]-[0047]).

Regarding claim 38, Christopoulos and Anantharamu disclose "the method of claim 25,

wherein the received stream includes a stream of a first resolution, and

wherein the encoding system re-encodes the received stream of the first resolution to stream of a second resolution, a first frame rate and a first bandwidth" ([0002], [0036]-[0038], [0046]-[0047], [0056], Fig. 3).

Regarding claim 42, Christopoulos and Anantharamu disclose "the method of claim 38, wherein the second resolution is a resolution of a quarter common intermediate format (QCIF) or smaller" ([0047]).

Regarding claim 44, Christopoulos and Anantharamu disclose "the method of claim 25, further comprising receiving the multimedia stream from a mobile station" ([0003], [0035]).

Regarding claim 45, Christopoulos and Anantharamu disclose "the method of claim 44, wherein the mobile station is operable in the wireless communication system" ([0003], [0035]).

Regarding claim 46, Christopoulos and Anantharamu disclose "the method of claim 25, further comprising the multimedia stream is received using an over the air communication air interface" ([0007], [0035]).

Regarding claim 47, Christopoulos and Anantharamu disclose "the method of claim 25, further comprising receiving the multimedia stream via an internet connection" ([0003], [0035]).

Regarding claim 49, Christopoulos discloses "an apparatus, operable in a wireless communication system, comprising:

means for receiving, within the wireless communication system, a decoded stream;" ([0033], [0035]-[0036], Fig. 1 item 120 gateway with item 125 transcoder receives a multimedia stream from item 113 multimedia storage)

"means for re-encoding, within the wireless communication system, the received decoded stream to output an encoded stream; and

means for determining, within the wireless communication system, an encoder parameter set to use for re encoding, wherein the encoder parameter set is determined according to an encoding scheme based on available bandwidth within the wireless communication system" ([0007], [0037]-[0038], [0046], Fig. 1, Fig. 3 items 350 and 360, item 125 the transcoder selects a scheme to re-encode multimedia stream based upon various factors including available bandwidth).

But, Christopoulos does not explicitly state dynamically determining a current bandwidth available for the multimedia stream based on a current number and types of users. However, Anantharamu teaches dynamically estimating the available bandwidth available and transcodes the stream based on a current number and types of users ([0020], [0035], Figs. 2-3)

Therefore it would have been obvious at the time of the invention to combine the teachings of Christopoulos for adaptive encoding in a wireless communication system with the teachings of Anantharamu for adaptive encoding in a wireless communication system based on dynamically estimating the available bandwidth according to the current number and types of users. One would have been motivated to do so to provide a more efficient manner of streaming video in dynamic bandwidth networks (see Anantharamu [0005).

Regarding claim 50, Christopoulos and Anantharamu disclose "the apparatus of claim 49, further comprising means for selecting the first encoding scheme from a group

consisting of a scheme based on a system bandwidth, a scheme based on a wireless receiver capability, a scheme based on a number of users requesting a specific multimedia stream at a designated QoS, a scheme based on a multimedia data type, a scheme based on a user preference and a scheme based on characteristics of a mobile station" ([0036-[0038], [0046]-[0047], Fig. 3).

Regarding claim 53, Christopoulos and Anantharamu disclose "the apparatus of claim 50, further comprising means for executing the encoder parameter set using an encoder" ([0014], Fig. 1 item 125).

Regarding claim 56, Christopoulos and Anantharamu disclose "the apparatus of claim 49, further comprising means for receiving the multimedia stream at a decoder and decoding the received stream to output the decoded stream" ([0036]-[0038], [0046]-[0047], Figs. 3 and 5).

Regarding claim 57, Christopoulos and Anantharamu disclose "the apparatus of claim 49, further comprising means for determining the encoding parameter set to use for re-encoding based on the encoding scheme" ([0007], [0036], [0046]).

Regarding claim 58, Christopoulos and Anantharamu disclose "the apparatus of claim 49, further comprising means for executing the encoder parameter set using an encoder" ([0014], Fig. 1 item 125).

Regarding claim 59, Christopoulos and Anantharamu disclose "the apparatus of claim 49, further comprising means for transmitting the re-encoded stream" ([0003], [0007], [0035], Fig. 1 item 130, a transmitter and receiver at both ends for bi-directional wireless communications would be necessary).

Regarding claim 60, Christopoulos and Anantharamu disclose "the apparatus of claim 49, further comprising means for generating an output, configurable for handheld devices that require a first frame rate and a first bandwidth" ([0002], [0036]-[0038], [0046]-[0047]).

Regarding claim 62, Christopoulos and Anantharamu disclose "the apparatus of claim 49,

wherein the received stream includes a stream of a first resolution, and

wherein the encoding system re-encodes the received stream of the first resolution to stream of a second resolution, a first frame rate and a first bandwidth" ([0002], [0036]-[0038], [0046]-[0047], [0056], Fig. 3).

Regarding claim 66, Christopoulos and Anantharamu disclose "the apparatus of claim 62, wherein the second resolution is a resolution of a quarter common intermediate format (QCIF) or smaller" ([0047]).

Regarding claim 68, Christopoulos and Anantharamu disclose "the apparatus of claim 49, further comprising means for receiving the multimedia stream from a mobile station" ([0003], [0035]).

Regarding claim 69, Christopoulos and Anantharamu disclose "the apparatus of claim 68, wherein the mobile station phone is operable in wireless communication system" ([0003], [0035]).

Regarding claim 70, Christopoulos and Anantharamu disclose "the apparatus of claim 49, further comprising means for receiving the multimedia stream via a communication air interface" ([0007], [0035]).

Regarding claim 71, Christopoulos and Anantharamu disclose "the apparatus of claim 49, further comprising means for receiving the multimedia stream via an internet connection" ([0003], [0035]).

Regarding claim 73, Christopoulos discloses "a mobile station, operable in a communication system, comprising:

a transceiver configured to communicate with a wireless provider system; and" ([0003], [0007], [0035], Fig. 1 item 130, a transmitter and receiver at both ends for bi-directional wireless communications would be necessary)

"a processor for displaying a multimedia stream received from the wireless provider system via the transceiver, wherein the multimedia stream is encoded using a first encoding scheme selected from a group of encoding schemes" ([0036]-[0038], Fig. 3).

But, Christopoulos does not explicitly state dynamically determining a current bandwidth available for the multimedia stream based on a current number and types of users. However, Anantharamu teaches dynamically estimating the available bandwidth available and transcodes the stream based on a current number and types of users ([0020], [0035], Figs. 2-3)

Therefore it would have been obvious at the time of the invention to combine the teachings of Christopoulos for adaptive encoding in a wireless communication system with the teachings of Anantharamu for adaptive encoding in a wireless communication system based on dynamically estimating the available bandwidth according to the current number and types of users. One would have been motivated to do so to provide a more efficient manner of streaming video in dynamic bandwidth networks (see Anantharamu [0005).

Regarding claim 74, Christopoulos and Anantharamu disclose "the mobile station of claimed in 73, wherein the group of encoding scheme consisting of a scheme based on a system bandwidth, a scheme based on available system bandwidth, a scheme based on a wireless receiver capability, a scheme based on a number of users requesting a specific multimedia stream at a designated QoS, a scheme based on a multimedia data type, a scheme based on a user preference and a scheme based on characteristics of a mobile station" ([0036-[0038], [0046]-[0047], Figs. 3 and 5).

Regarding claim 77, Christopoulos and Anantharamu disclose "the mobile station of claim 74, further comprising an encoder for executing the encoder parameter set based on the encoding scheme" ([0014], [0035], Fig. 1 item 125).

Regarding claim 79, Christopoulos and Anantharamu disclose "the mobile station of claim 74, further comprising a bandwidth manager for determining the available bandwidth for a requested multimedia stream" ([0007], [0035]-[0036], [0046]).

Regarding claim 80, Christopoulos discloses "a communication system, comprising:

"an encode manager for receiving a multimedia stream, wherein the multimedia is at a first resolution; and" ([0033], [0035]-[0036], [0046]-[0047], Fig. 1 item

120 gateway with item 125 transcoder receives a multimedia stream from item 113 multimedia storage)

"an encoder system for re encoding the received stream to a second resolution, using an encoding parameter set to render an encoded stream with principles set forth by the encoding parameter set, wherein the encoding parameter set is determined based on an encoding scheme selected from a group of encoding schemes" ([0037]-[0038], [0046], Fig. 1, Fig. 3 items 350 and 360, item 125 the transcoder selects a scheme to re-encode multimedia stream based upon various factors).

But, Christopoulos does not explicitly state dynamically determining a current bandwidth available for the multimedia stream based on a current number and types of users. However, Anantharamu teaches dynamically estimating the available bandwidth available and transcodes the stream based on a current number and types of users ([0020], [0035], Figs. 2-3)

Therefore it would have been obvious at the time of the invention to combine the teachings of Christopoulos for adaptive encoding in a wireless communication system with the teachings of Anantharamu for adaptive encoding in a wireless communication system based on dynamically estimating the available bandwidth according to the current number and types of users. One would have been motivated to do so to provide a more efficient manner of streaming video in dynamic bandwidth networks (see Anantharamu [0005).

Regarding claim 81, Christopoulos and Anantharamu disclose "a communication system, comprising:

at least one decoder receiving incoming encoded multimedia streams and decoding the streams to render decoded streams;" ([0033], [0045]-[0036], [0046]-[0047], Fig. 1 item 120 gateway with item 125 transcoder receives a multimedia stream from item 113 multimedia storage)

"at least one encoding system configured for receiving a decoded stream and encoding it using one of at least two encoding parameter sets to render an encoded stream;

at least one computer determining which encoding parameter set to use to encode a decoded stream; and" ([0036]-[0038], [0046]-[0047], Fig. 1, Fig. 3 items 350 and 360, item 125 the transcoder selects a scheme to re-encode multimedia stream based upon various factors)

"at least one wireless transceiver for transmitting an encoded stream" ([0003], [0007], [0035], Fig. 1 item 130, a transmitter and receiver at both ends for bi-directional wireless communications would be necessary).

Regarding claim 84, Christopoulos and Anantharamu disclose "the system of Claim 81, wherein the computer determines which of the at least two encoding parameter sets to use based at least in part on a wireless mobile receiver capability" ([0035], [0036]-[0038], [0046], Figs. 3 and 5).

Regarding claim 85, Christopoulos and Anantharamu disclose "the system of Claim 81, wherein the computer determines which of the at least two encoding parameter sets to use based at least in part on a number of users requesting a specific multimedia stream at a designated QoS for that stream" ([0035], [0036]-[0038], [0046], Figs. 3 and 5).

Regarding claim 86, Christopoulos and Anantharamu disclose "the system of Claim 81, wherein the computer determines which of the at least two encoding parameter sets to use based at least in part on a multimedia data type" ([0035], [0036]-[0038], [0046], Figs. 3 and 5).

Regarding claim 87, Christopoulos and Anantharamu disclose "the system of Claim 81, wherein the computer determines which of the at least two encoding parameter sets to use based at least in part on a wireless user preference" ([0035], [0036]-[0038], [0046], Figs. 3 and 5).

Regarding claim 91, Christopoulos and Anantharamu disclose "the system of Claim 81, wherein at least one of the at least two encoding parameter sets_ is capable of encoding a multimedia stream at a resolution of a quarter common intermediate format (QCIF) or smaller" ([0046]-[0047]).

Regarding claim 93, Christopoulos discloses "a method for wirelessly providing digital multimedia within a wireless communication system, comprising:

receiving an encoded multimedia stream;

decoding the stream to render a decoded stream;

selecting at least one of at least two encoding schemes to re encode the stream at a wireless provider facility to render a re encoded stream; and

wirelessly transmitting the re-encoded stream to at least one wireless mobile station" ([0035], [0036]-[0038], [0046]-[0047], Figs. 3 and 5).

But, Christopoulos does not explicitly state dynamically determining a current bandwidth available for the multimedia stream based on a current number and types of users. However, Anantharamu teaches dynamically estimating the available bandwidth available and transcodes the stream based on a current number and types of users ([0020], [0035], Figs. 2-3)

Therefore it would have been obvious at the time of the invention to combine the teachings of Christopoulos for adaptive encoding in a wireless communication system with the teachings of Anantharamu for adaptive encoding in a wireless communication system based on dynamically estimating the available bandwidth according to the current number and types of users. One would have been motivated to do so to provide a more efficient manner of streaming video in dynamic bandwidth networks (see Anantharamu [0005).

Regarding claim 94, Christopoulos and Anantharamu disclose "the method of Claim 93, wherein the selecting act is undertaken dynamically" ([0036]-[0038], [0046]-[0047], Fig. 5).

Regarding claim 96, Christopoulos and Anantharamu disclose "the method of Claim 93, wherein the selecting act is undertaken based at least in part on a wireless mobile receiver capability" ([0036]-[0038], [0046]-[0047], Fig. 5).

Regarding claim 97, Christopoulos and Anantharamu disclose "the method of Claim 93, wherein the selecting act is undertaken based at least in part on a wireless user preference" ([0036]-[0038], [0046]-[0047], Fig. 5).

Regarding claim 101, Christopoulos and Anantharamu disclose "the method of Claim 93, wherein the selecting act is undertaken based at least in part on a multimedia data type" ([0036]-[0038], [0046]-[0047], Fig. 5).

Regarding claim 102, Christopoulos discloses "a wireless provider system, comprising:

means for decoding a received encoded multimedia stream;

first means for re-encoding the stream;

second means for re-encoding the stream; and

logic means for determining which one of the first and second means for re-encoding to use, based on at least one factor" ([0035], [0036]-[0038], [0046]-[0047], Figs. 3 and 5).

But, Christopoulos does not explicitly state dynamically determining a current bandwidth available for the multimedia stream based on a current number and types of users. However, Anantharamu teaches dynamically estimating the available bandwidth available and transcodes the stream based on a current number and types of users ([0020], [0035], Figs. 2-3)

Therefore it would have been obvious at the time of the invention to combine the teachings of Christopoulos for adaptive encoding in a wireless communication system with the teachings of Anantharamu for adaptive encoding in a wireless communication system based on dynamically estimating the available bandwidth according to the current number and types of users. One would have been motivated to do so to provide a more efficient manner of streaming video in dynamic bandwidth networks (see Anantharamu [0005).

Regarding claim 105, Christopoulos and Anantharamu disclose "the system of Claim 102, wherein the factor is a wireless user characteristic" ([0036]-[0038], [0046]-[0047], Fig. 5).

Regarding claim 106, Christopoulos and Anantharamu disclose "the system of Claim 102, wherein the factor is a multimedia data type" ([0036]-[0038], [0046]-[0047], Fig. 5).

Regarding claim 107, Christopoulos and Anantharamu disclose "the system of Claim 102, wherein the factor is a wireless user preference" ([0036]-[0038], [0046]-[0047], Fig. 5).

Regarding claim 111, Christopoulos and Anantharamu disclose "the system of claim 102, wherein the factor is selected from group of factors consisting of a factor based on a system bandwidth, a factor based on a current available system bandwidth, a factor based on a wireless user characteristic, a factor based on a number of users requesting a specific multimedia stream at a designated QoS a factor based on a multimedia data type and factor based on a wireless user preference" ([0036]-[0038], [0046]-[0047], Fig. 5).

Regarding claim 112, Christopoulos discloses "a communication system, comprising:

decoder means for receiving incoming encoded multimedia streams and decoding the streams to output decoded streams;" ([0033], [0045]-[0036], [0046]-[0047], Fig. 1 item 120 gateway with item 125 transcoder receives a multimedia stream from item 113 multimedia storage)

"encoder means for receiving and encoding at least one of the decoded streams using one of at least two encoding parameter sets to output an encoded stream,

wherein the encoder means further includes means for determining which encoding parameter set to use to encode the at least one of the decoded streams; and" ([0036]-[0038], [0046]-[0047], Fig. 1, Fig. 3 items 350 and 360, item 125 the transcoder selects a scheme to re-encode multimedia stream based upon various factors)

"transceiver means for transmitting an encoded stream" ([0003], [0007], [0035], Fig. 1 item 130, a transmitter and receiver at both ends for bi-directional wireless communications would be necessary).

But, Christopoulos does not explicitly state dynamically determining a current bandwidth available for the multimedia stream based on a current number and types of users. However, Anantharamu teaches dynamically estimating the available bandwidth available and transcodes the stream based on a current number and types of users ([0020], [0035], Figs. 2-3)

Therefore it would have been obvious at the time of the invention to combine the teachings of Christopoulos for adaptive encoding in a wireless communication system with the teachings of Anantharamu for adaptive encoding in a wireless communication system based on dynamically estimating the available bandwidth according to the current number and types of users. One would have been motivated to do so to provide a more efficient manner of streaming video in dynamic bandwidth networks (see Anantharamu [0005).

Regarding claim 115, Christopoulos and Anantharamu disclose "the system of Claim 112, wherein the encoder means includes means for determining which of the at least two encoding parameter sets to use based at least in part on a wireless mobile receiver capability" ([0036]-[0038], [0046]-[0047], Fig. 5).

Regarding claim 116, Christopoulos and Anantharamu disclose ""the system of Claim 112, wherein the encoder means includes means for determining which of the at least two encoding parameter sets to use based at least in part on a number of users requesting a specific multimedia stream at a designated QoS for that stream" ([0036]-[0038], [0046]-[0047], Fig. 5).

Regarding claim 117, Christopoulos and Anantharamu disclose "the system of Claim 112, wherein the encoder means includes means for determining which of the at least two encoding parameter sets to use based at least in part on a multimedia data type" ([0036]-[0038], [0046]-[0047], Fig. 5).

Regarding claim 118, Christopoulos and Anantharamu disclose "the system of Claim 112, wherein the encoder means includes means for determining which of the at least two encoding parameter sets to use based at least in part on a wireless user preference" ([0036]-[0038], [0046]-[0047], Fig. 5).

Regarding claim 122, Christopoulos and Anantharamu disclose "the system of Claim 112, wherein at least one of the at least two encoding parameter sets comprises an an encoding parameter set that is used to encode the multimedia stream at a resolution of a quarter common intermediate format (QCIF) or smaller" ([0036]-[0038], [0046]-[0047], Fig. 5).

4. Claims 3-4, 24, 27-28, 48, 51-52, 72, 75-76, 88-90, 98-100, 108-110, and 119-121 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christopoulos et al. (US 2001/0047517 hereinafter Christopoulos) in view of Anantharamu et al. (US 2002/0136298 hereinafter Anantharamu), and in further view of Vetro et al. (US 2004/0203851 hereinafter Vetro)

Regarding claims 3-4, 24, 27-28, 48, 51-52, and 72, Christopoulos and Anantharamu disclose the limitations of claims 1-2, 25-26, and 49-50, as described above, but while Christopoulos discloses selecting an encoding means based on various parameters such as user preferences and multimedia data type, Christopoulos does not explicitly state doing so with a corresponding billing scheme.

However, Vetro teaches the delivery of content with content adaptation via transcoding ([0079]-[0082]), where a billing method is agreed upon for the content delivery ([0067], [0073]-[0078]), and billing method is based on various factors including environment descriptions ([0035]-[0041]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Christopoulos for selecting a more customized encoding means based on various parameters such as user preferences and multimedia data type with the teachings of Vetro for selecting a more customized encoding means based on various parameters such as user preferences and multimedia data type with corresponding billing scheme. One would have been motivated to do so, for the purpose of generating a more adaptable billing scheme based on a more customized encoding and delivery of data.

Regarding claims 75-76, Christopoulos and Anantharamu disclose the mobile station of claim 74 as described above, but while Christopoulos discloses selecting an encoding means based on various parameters such as user preferences and multimedia data type, Christopoulos does not explicitly state doing so with a corresponding billing scheme.

However, Vetro teaches the delivery of content with content adaptation via transcoding ([0079]-[0082]), where a billing method is agreed upon for the content delivery ([0067], [0073]-[0078]), and billing method is based on various factors including environment descriptions ([0035]-[0041]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Christopoulos and Anantharamu for selecting a more customized encoding means based on various parameters such as

user preferences and multimedia data type with the teachings of Vetro for selecting a more customized encoding means based on various parameters such as user preferences and multimedia data type with corresponding billing scheme. One would have been motivated to do so, for the purpose of generating a more adaptable billing scheme based on a more customized encoding and delivery of data.

Regarding claims 88-90, Christopoulos and Anantharamu disclose the system of claim 86 as described above, but while Christopoulos discloses selecting an encoding means based on various parameters such as user preferences and multimedia data type, Christopoulos does not explicitly state doing so with a corresponding billing scheme.

However, Vetro teaches the delivery of content with content adaptation via transcoding ([0079]-[0082]), where a billing method is agreed upon for the content delivery ([0067], [0073]-[0078]), and billing method is based on various factors including environment descriptions ([0035]-[0041]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Christopoulos and Anantharamu for selecting a more customized encoding means based on various parameters such as user preferences and multimedia data type with the teachings of Vetro for selecting a more customized encoding means based on various parameters such as user preferences and multimedia data type with corresponding billing scheme. One would

have been motivated to do so, for the purpose of generating a more adaptable billing scheme based on a more customized encoding and delivery of data.

Regarding claims 98-100, Christopoulos and Anantharamu disclose the method of claim 93 as described above, but while Christopoulos discloses selecting an encoding means based on various parameters such as user preferences and multimedia data type, Christopoulos does not explicitly state doing so with a corresponding billing scheme.

However, Vetro teaches the delivery of content with content adaptation via transcoding ([0079]-[0082]), where a billing method is agreed upon for the content delivery ([0067], [0073]-[0078]), and billing method is based on various factors including environment descriptions ([0035]-[0041]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Christopoulos and Anantharamu for selecting a more customized encoding means based on various parameters such as user preferences and multimedia data type with the teachings of Vetro for selecting a more customized encoding means based on various parameters such as user preferences and multimedia data type with corresponding billing scheme. One would have been motivated to do so, for the purpose of generating a more adaptable billing scheme based on a more customized encoding and delivery of data.

Regarding claims 108-110, Christopoulos and Anantharamu disclose the system of claim 102 as described above, but while Christopoulos discloses selecting an encoding means based on various parameters such as user preferences and multimedia data type, Christopoulos does not explicitly state doing so with a corresponding billing scheme.

However, Vetro teaches the delivery of content with content adaptation via transcoding ([0079]-[0082]), where a billing method is agreed upon for the content delivery ([0067], [0073]-[0078]), and billing method is based on various factors including environment descriptions ([0035]-[0041]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Christopoulos and Anantharamu for selecting a more customized encoding means based on various parameters such as user preferences and multimedia data type with the teachings of Vetro for selecting a more customized encoding means based on various parameters such as user preferences and multimedia data type with corresponding billing scheme. One would have been motivated to do so, for the purpose of generating a more adaptable billing scheme based on a more customized encoding and delivery of data.

Regarding claims 119-121, Christopoulos and Anantharamu disclose the system of claim 112 as described above, but while Christopoulos discloses selecting an encoding means based on various parameters such as user preferences and

multimedia data type, Christopoulos does not explicitly state doing so with a corresponding billing scheme.

However, Vetro teaches the delivery of content with content adaptation via transcoding ([0079]-[0082]), where a billing method is agreed upon for the content delivery ([0067], [0073]-[0078]), and billing method is based on various factors including environment descriptions ([0035]-[0041]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Christopoulos and Anantharamu for selecting a more customized encoding means based on various parameters such as user preferences and multimedia data type with the teachings of Vetro for selecting a more customized encoding means based on various parameters such as user preferences and multimedia data type with corresponding billing scheme. One would have been motivated to do so, for the purpose of generating a more adaptable billing scheme based on a more customized encoding and delivery of data.

5. Claims 6, 30, 54, and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christopoulos et al. (US 2001/0047517 hereinafter Christopoulos) and view of Anantharamu et al. (US 2002/0136298 hereinafter Anantharamu) as applied to claims 2, 26, 50, and 74 above, and in view of Wang et al. (US 2002/0152317 hereinafter Wang).

Regarding claim 6, Christopoulos and Anantharamu disclose the apparatus of claim 2 as described above, but while Christopoulos teaches selecting an encoding scheme based on various parameters and subsequently encoding and received stream, Christopoulos does not explicitly state the apparatus "comprising a plurality of encoders, each for executing the encoder parameter set based on the encoding scheme".

However, Wang teaches a transcoder using a plurality of encoders each for executing an encoder parameter set ([0027], Fig. 6), where the transcoder receives an encoded stream, decodes the encoded stream with a decoder (Fig. 6 item 62) then re-encodes the received stream via selection of a plurality of encoders (Fig. 6 items 64A-N) creating the possibility of multiple output streams to clients using multiple different encoding parameters sets specific to the clients ([0028]-[0029], [0030]-[0035]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to combine the teachings of Christopoulos and Anantharamu for selecting an encoding means when re-encoding a receiving stream based upon various parameters via use of a transcoder with the teachings of Wang for use of multiple encoders in a transcoder as an encoding means when re-encoding a receiving stream based upon parameters. One would have been motivated to use multiple encoders and a decoder in a transcoder as opposed to multiple transcoders for the purpose of using a single transcoder to process the same stream for an output encoding scheme as necessary for any requesting clients as suggested by Wang ([0030]-[0031]).

Regarding claim 30, Christopoulos and Anantharamu disclose the method of claim 26 as described above, but while Christopoulos teaches selecting an encoding scheme based on various parameters and subsequently encoding and received stream, Christopoulos does not explicitly state the method "comprising executing the encoder parameter set using a plurality of encoders".

However, Wang teaches a transcoder using a plurality of encoders each for executing an encoder parameter set ([0027], Fig. 6), where the transcoder receives an encoded stream, decodes the encoded stream with a decoder (Fig. 6 item 62) then re-encodes the received stream via selection of a plurality of encoders (Fig. 6 items 64A-N) creating the possibility of multiple output streams to clients using multiple different encoding parameters sets specific to the clients ([0028]-[0029], [0030]-[0035]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to combine the teachings of Christopoulos and Anantharamu for selecting an encoding means when re-encoding a receiving stream based upon various parameters via use of a transcoder with the teachings of Wang for use of multiple encoders in a transcoder as an encoding means when re-encoding a receiving stream based upon parameters. One would have been motivated to use multiple encoders and a decoder in a transcoder as opposed to multiple transcoders for the purpose of using a single transcoder to process the same stream for an output encoding scheme as necessary for any requesting clients as suggested by Wang ([0030]-[0031]).

Regarding claim 54, Christopoulos and Anantharamu disclose the apparatus of claim 50 as described above, but while Christopoulos teaches selecting an encoding scheme based on various parameters and subsequently encoding and received stream, Christopoulos does not explicitly state the apparatus "comprising means for executing the encoder parameter set using a plurality of encoders".

However, Wang teaches a transcoder using a plurality of encoders each for executing an encoder parameter set ([0027], Fig. 6), where the transcoder receives an encoded stream, decodes the encoded stream with a decoder (Fig. 6 item 62) then re-encodes the received stream via selection of a plurality of encoders (Fig. 6 items 64A-N) creating the possibility of multiple output streams to clients using multiple different encoding parameters sets specific to the clients ([0028]-[0029], [0030]-[0035]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to combine the teachings of Christopoulos and Anantharamu for selecting an encoding means when re-encoding a receiving stream based upon various parameters via use of a transcoder with the teachings of Wang for use of multiple encoders in a transcoder as an encoding means when re-encoding a receiving stream based upon parameters. One would have been motivated to use multiple encoders and a decoder in a transcoder as opposed to multiple transcoders for the purpose of using a single transcoder to process the same stream for an output encoding scheme as necessary for any requesting clients as suggested by Wang ([0030]-[0031]).

Regarding claim 78, Christopoulos and Anantharamu disclose the mobile station of claim 74 as described above, but while Christopoulos teaches selecting an encoding scheme based on various parameters and subsequently encoding and received stream, Christopoulos does not explicitly state the apparatus "comprising a plurality of encoders, each for executing the encoder parameter set based on the encoding scheme".

However, Wang teaches a transcoder using a plurality of encoders each for executing an encoder parameter set ([0027], Fig. 6), where the transcoder receives an encoded stream, decodes the encoded stream with a decoder (Fig. 6 item 62) then re-encodes the received stream via selection of a plurality of encoders (Fig. 6 items 64A-N) creating the possibility of multiple output streams to clients using multiple different encoding parameters sets specific to the clients ([0028]-[0029], [0030]-[0035]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to combine the teachings of Christopoulos and Anantharamu for selecting an encoding means when re-encoding a receiving stream based upon various parameters via use of a transcoder with the teachings of Wang for use of multiple encoders in a transcoder as an encoding means when re-encoding a receiving stream based upon parameters. One would have been motivated to use multiple encoders and a decoder in a transcoder as opposed to multiple transcoders for the purpose of using a single transcoder to process the same stream for an output encoding scheme as necessary for any requesting clients as suggested by Wang ([0030]-[0031]).

6. Claims 13, 15-17, 37, 39-41, 61, and 63-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christopoulos et al. (US 2001/0047517 hereinafter Christopoulos) in view of Anantharamu et al. (US 2002/0136298 hereinafter Anantharamu), and in further view of Anand et al. (US 6,920,179 hereinafter Anand).

Regarding claims 13, 37, and 61, Christopoulos and Anantharamu disclose the limitations of claims 12, 36, and 60 as described above, but while Christopoulos teaches the use of QCIF which typically transmitted at 10 frames per second, hereinafter 'fps', is within the bandwidth of 16 kilo-bits per second, hereinafter kbps, Christopoulos does not explicitly state a first frame rate of 10fps and bandwidth of 16kbps.

However, Anand discloses transcoding in a heterogeneous network for instance a wired-to-wireless network where a received stream (col. 4 line 66 - col. 5 line 31, Fig. 2) may be received from a wired network (Fig. 4 item 420) and subsequently transcoded at a transcoder (Fig 4 item 424) prior to transmission to a mobile receiver (Fig. 4 item 104), into a different encoded stream (col. 7 line 54 – 65, Figs. 3 and 5) at different fps and bps including QCIF at 10fps.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Christopoulos and Anantharamu for transcoding a received stream into various levels including QCIF with the teachings of Anand for transcoding in a heterogeneous network for instance a wired-to-wireless network where a received stream is transcoded into various levels including QCIF at 10fps. One would have been motivated to do so, for the purpose of

providing a more customized encoding scheme and better encoding adaptation when transcoding from a source stream via using widely used formats such as QCIF and CIF at varying fps such as 10 and 15fps and varying bps.

Regarding claims 15, 39, and 65, Christopoulos and Anantharamu disclose the limitations of claims 14, 38, and 62 as described above, but while Christopoulos teaches the use of commonly used resolution formats in video communications such as QCIF and CIF, Christopoulos does not explicitly state a first resolution is VGA format, but does state a second resolution and first frame rate configured for a handheld device as described above.

However, Anand discloses transcoding in a heterogeneous network for instance a wired-to-wireless network where a received stream (col. 4 line 66 - col. 5 line 31, Fig. 2) may be received from a wired network (Fig. 4 item 420) and subsequently transcoded at a transcoder (Fig 4 item 424) prior to transmission to a mobile receiver (Fig. 4 item 104), into a different encoded stream (col. 7 line 54 – 65, Figs. 3 and 5) at different fps and bps including QCIF at 10fps, where OFFICIAL NOTICE is taken that the use of VGA widely used in wired communications such as for personal computer monitors, and therefore would have been obvious to try for the purpose of providing compatibility with source streams of widely used wired communication formats such as VGA.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Christopoulos and Anantharamu for transcoding a received stream of various formats with the teachings of

Anand for transcoding in a heterogeneous network for instance a wired-to-wireless network where a received stream is transcoded from various wired formats into various wireless formats. One would have been motivated to do so, for providing compatibility with source streams of widely used wired communication formats.

Regarding claims 16-17, 39-40, and 63-64, Christopoulos and Anantharamu disclose the limitations of claims 14, 38, and 62 as described above, but while Christopoulos teaches the use of QCIF and CIF which typically transmitted at 10 frames per second, hereinafter 'fps', or 15 is within the bandwidth of 16 kilo-bits per second, hereinafter kbps, to 64kbps and 32 to 64 kbps, respectively, Christopoulos does not explicitly state a first frame rate of 10fps and bandwidth of 16kbps.

However, Anand discloses transcoding in a heterogeneous network for instance a wired-to-wireless network where a received stream (col. 4 line 66 - col. 5 line 31, Fig. 2) may be received from a wired network (Fig. 4 item 420) and subsequently transcoded at a transcoder (Fig 4 item 424) prior to transmission to a mobile receiver (Fig. 4 item 104), into a different encoded stream (col. 7 line 54 – 65, Figs. 3 and 5) at different fps and bps including QCIF at 10fps.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Christopoulos and Anantharamu for transcoding a received stream into various levels including QCIF with the teachings of Anand for transcoding in a heterogeneous network for instance a wired-to-wireless network where a received stream is transcoded into various levels

including QCIF at 10fps. One would have been motivated to do so, for the purpose of providing a more customized encoding scheme and better encoding adaptation when transcoding from a source stream via using widely used formats such as QCIF and CIF at varying fps such as 10 and 15fps and varying bps.

7. Claims 19, 43, 67, 92 and 123 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christopoulos et al. (US 2001/0047517 hereinafter Christopoulos) in view of Anantharamu et al. (US 2002/0136298 hereinafter Anantharamu) as applied to claims 14, 38, 62, 81, and 112.

Regarding claims 19, 43, and 67, Christopoulos and Anantharamu disclose the limitations of claims 14, 38, and 62 as described above, but while Christopoulos teaches the use of CIF and QCIF with transcoding along with QCIF being a resolution in an encoding parameter set and various other resolutions, Christopoulos does not explicitly state CIF being a resolution in an encoding parameter set. However, OFFICIAL NOTICE is taken that the use of resolutions such as QCIF and CIF are widely used resolution standards for mobile display device, therefore CIF would have been obvious to try for the purpose of providing selection of widely used resolution standards when selecting encoding parameter sets.

Regarding claim 92, Christopoulos and Anantharamu disclose the system of claim 81 as described above, but while Christopoulos teaches the use of CIF and QCIF with transcoding along with QCIF being a resolution in an encoding parameter set,

Christopoulos does not explicitly state CIF being a resolution in an encoding parameter set. However, OFFICIAL NOTICE is taken that the use of resolutions such as QCIF and CIF are widely used resolution standards for mobile display device, therefore CIF would have been obvious to try for the purpose of providing selection of widely used resolution standards when selecting encoding parameter sets.

Regarding claim 123, Christopoulos and Anantharamu disclose the system of claim 112 as described above, but while Christopoulos teaches the use of CIF and QCIF with transcoding along with QCIF being a resolution in an encoding parameter set, Christopoulos does not explicitly state CIF being a resolution in an encoding parameter set. However, OFFICIAL NOTICE is taken that the use of resolutions such as QCIF and CIF are widely used resolution standards for mobile display device, therefore CIF would have been obvious to try for the purpose of providing selection of widely used resolution standards when selecting encoding parameter sets.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contacts

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK P. STANLEY whose telephone number is (571)270-3757. The examiner can normally be reached on 8:00AM - 5:00PM Mon-Fri EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Beliveau can be reached on (571) 272-7343. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark P Stanley/
Examiner, Art Unit 2427

/Scott Beliveau/
Supervisory Patent Examiner, Art Unit 2427